

## **REMARKS**

### **A. 35 U.S.C. § 102**

#### **1. Claims 1, 2 and 4-12**

In the Office Action of February 4, 2003, claims 1, 2 and 4-12 were rejected under 35 U.S.C. §102(b) as being anticipated by Schmitt. Applicant traverses this rejection. Claim 1 recites displaying the value of the controlling variable. In contrast, Schmitt discloses a method to automatically correct periodic incremental signals regarding possible errors in phase and amplitude. Original signals  $S_1$ ,  $S_2$  are corrected on the basis of correction data  $\Delta D$  and fed to a counter with a display unit A. The display unit A displays a count of pulses that pass through the component 6. (Col. 3, ll. 48-54). The pulse count of Schmitt is not a controlling variable that is used to regulate position-dependent output signals to constant amplitudes as recited in claim 1. Accordingly, claim 1 is not anticipated by Schmitt and the rejection is improper and should be withdrawn.

It is noted that the Office Action has identified lines 10+ of column 2 of Schmitt as disclosing the recited displaying. However, a review of this passage does not disclose what is shown on the display A. If this rejection is repeated in the next Office Action, Applicants request that the Office Action specifically identify where Schmitt discloses displaying a value of a controlling variable that has the properties

recited in claim 1. If no identification is made, it should be deemed an admission that Schmitt does not disclose the recited displaying.

Besides not being anticipated by Schmitt, claim 1 is not rendered obvious by Schmitt. In particular, there is no suggestion or motivation to use the count displayed in display A to regulate position-dependent output signals to constant amplitudes as recited in claim 1. Without such suggestion or motivation, claim 1 is patentable over Schmitt.

Note that the rejection of claim 2 is improper because Schmitt does not disclose or suggest converting the value of the controlling variable into a digital signal suitable for serial transmission. The Office Action has relied on correction component R as being a controlling variable. Assuming for arguments sake that correction component R is a controlling variable, the component R is not converted to a digital signal suitable for serial transmission. Instead, component R is fed to memory M where stored correction data  $\Delta D$  is generated and read by generator G. (Col. 2, ll. 41-44; See FIGS. 1-2). Nowhere does Schmitt disclose converting the component R to a digital signal suitable for serial transmission. Accordingly, claim 2 is not anticipated by Schmitt and the rejection is improper and should be withdrawn.

The rejection of claim 7 is also improper. Claim 7 recites transmitting the digital signal in a serial protocol at a predetermined bit width to an evaluation unit. The Office

Action has only cited as item 6 and FIG. 2 as showing such transmitting. A review of item 6 and FIG. 2 does not reveal transmitting a digital signal in a serial protocol at a predetermined bit width. Accordingly, claim 7 is not anticipated by Schmitt and the rejection is improper and should be withdrawn.

The rejection of claim 8 is also improper. Claim 8 recites converting the transmitted value of the controlling variable into a variable that corresponds directly to the current scanning spacing. Schmitt fails to disclose the recited converting. Evidence of this is the fact that the Office Action has failed to identify where Schmitt discloses the recited converting. Accordingly, claim 8 is not anticipated by Schmitt and the rejection is improper and should be withdrawn. If this rejection is repeated, Applicants demand that the Office Action specifically identify where Schmitt discloses the recited converting. If no identification is made, then it should be deemed an admission that Schmitt does not disclose such converting.

Note that the deletion of “(D)” in claim 8 is being made to clarify Applicant’s invention. Since the amendment does not change the scope or intended meaning of claim 8, the amendment is not being presented for reasons of patentability as defined in *Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 56 USPQ2d 1865 (Fed. Cir. 2000) (*en banc*), *overruled in part*, 535 U.S. 722, 122 S. Ct. 1831 (2002).

**2. Claims 13, 14 and 16-23**

Claims 13, 14 and 16-23 were rejected under 35 U.S.C. § 102(b) as being anticipated by Schmitt. Applicant traverses this rejection for several reasons. First, claim 13 has been canceled rendering the rejection moot. Regarding claim 14, it has been amended to be in independent form and recites a conversion device that converts the value of the controlling variable into a digital signal suitable for serial transmission. As pointed out above in Section A.1, Schmitt does not disclose converting the component R to a digital signal suitable for serial transmission. Accordingly, claim 14 is not anticipated by Schmitt and the rejection is improper and should be withdrawn.

Besides not being anticipated by Schmitt, claim 14 is not rendered obvious by Schmitt. In particular, there is no suggestion or motivation to convert component R to a digital signal suitable for serial transmission. Without such suggestion or motivation, claim 14 is patentable over Schmitt.

The rejection of claim 16 is also improper. Claim 16 recites a transmission device for transmitting the digital signal from the conversion device to an evaluation unit. Schmitt fails to disclose the recited transmission device. Evidence of this is the fact that the Office Action has failed to identify where Schmitt discloses the recited converting. Accordingly, claim 16 is not anticipated by Schmitt and the rejection is improper and should be withdrawn. If this rejection is repeated, Applicants demand that the Office

Action specifically identify where Schmitt discloses the recited transmission device. If no identification is made, then it should be deemed an admission that Schmitt does not disclose the recited transmission device.

The rejection of claim 17 is also improper. Claim 17 recites that the transmission device is a synchronous serial interface. Schmitt fails to disclose the recited transmission device. Evidence of this is the fact that the Office Action has failed to identify where Schmitt discloses the recited converting. Accordingly, claim 17 is not anticipated by Schmitt and the rejection is improper and should be withdrawn. If this rejection is repeated, Applicants demand that the Office Action specifically identify where Schmitt discloses the recited transmission device. If no identification is made, then it should be deemed an admission that Schmitt does not disclose the recited transmission device.

As mentioned above, claim 14 has been amended so as to be in independent form. Since the amendment incorporates subject matter that was inherently present in original claim 14, the amendment is not being presented for reasons of patentability as defined in *Festo*.

Claims 19, 21 and 22 have been amended so as to depend from claim 14 and are being presented to provide additional coverage for a position measuring device. Accordingly, the amendments of claims 19, 21 and 22 are not being presented for reasons of patentability as defined in *Festo*.

**B. 35 U.S.C. §103**

**1. Claim 3**

Claim 3 was rejected under 35 U.S.C. §103 as being obvious in view of Schmitt and Graham et al. Claim 3 depends from claim 1. Graham et al. does not overcome the deficiencies of Schmitt with respect to claim 1. In particular, Graham et al. does not suggest altering Schmitt to use the count displayed in display A to regulate position-dependent output signals to constant amplitudes as recited in claim 1. Without such suggestion or motivation, the rejection is improper and should be withdrawn.

The rejection of claim 3 is improper for the additional reason that there is no disclosure or suggestion in Schmitt or Graham et al. to set a scanning spacing of Schmitt based on the displayed value of the controlling variable. Evidence of this is the fact that the Office Action has failed to identify where either Schmitt or Graham et al. discloses setting the scanning spacing of Schmitt based on the displayed value of the controlling variable. Accordingly, claim 3 is not rendered obvious by Schmitt and Graham et al. and the rejection is improper and should be withdrawn. If this rejection is repeated, Applicants demand that the Office Action specifically identify where Schmitt or Graham et al. discloses the recited setting of a scanning spacing. If no identification is made, then it should be deemed an admission that neither Schmitt nor Graham et al. discloses the setting of a scanning spacing.

Note that each of the deletions of “(D)” in claim 3 are being made to clarify Applicant’s invention. Since the amendments do not change the scope or intended meaning of claim 3, the amendments are not being presented for reasons of patentability as defined in *Festo*.

**2. Claim 15**

Claim 15 was rejected under 35 U.S.C. §103 as being obvious in view of Schmitt and Graham et al. Claim 15 depends from claim 14. Graham et al. does not overcome the deficiencies of Schmitt with respect to claim 14 since Graham et al. does not suggest converting Schmitt’s component R to a digital signal suitable for serial transmission. Without such suggestion or motivation, the rejection is improper and should be withdrawn.

The rejection of claim 15 is improper for the additional reason that there is no disclosure or suggestion in Schmitt or Graham et al. to use a calibration element in Schmitt’s device for setting a scanning spacing. Evidence of this is the fact that the Office Action has failed to identify where either Schmitt or Graham et al. discloses a calibration element for setting the scanning spacing of Schmitt. It is noted that the Office Action appears to assert on page 5 that Graham et al. determines scale position relative to the mask. That assertion is unfounded. The passage relied on at column 1, lines 34+ states that the signal amplitude values of known encoders can be used to monitor the

scale position relative to the mask. (Col. 1, ll. 23-41). Nowhere does Graham et al. disclose that it monitors the scale position and nowhere does Graham et al. disclose using a calibration element for setting scanning spacing. Accordingly, claim 15 is not rendered obvious by Schmitt and Graham et al. and the rejection is improper and should be withdrawn. If this rejection is repeated, Applicants demand that the Office Action specifically identify where Schmitt or Graham et al. discloses the recited use of a calibration element for setting the scanning spacing. If no identification is made, then it should be deemed an admission that neither Schmitt nor Graham et al. discloses the use of a calibration element for setting the scanning spacing.

Please note that claim 15 has been amended so as to depend from claim 14 and is being presented to provide additional coverage for a position measuring device. Claim 15 has also been amended to correct an obvious typographical error regarding the word “elements.” Note that the deletion of “(D)” in claim 15 is being made to clarify Applicant’s invention. Since the amendments do not change the scope or intended meaning of claim 15, the amendments are not being presented for reasons of patentability as defined in *Festo*.

### **3. Claims 24-34**

Claims 24-34 were rejected under 35 U.S.C. § 103 as being obvious in view of Schmitt and Graham et al. Independent claim 24 recites “displaying said value of said



variable that directly corresponds to said actual scanning spacing.” As pointed above in Section A.1, Schmitt’s display unit A displays a count of pulses that pass through the component 6, wherein the pulse count is not a controlling variable that is used to regulate position-dependent output signals to constant amplitudes as recited in claim 24. As pointed out in Section B.1, Graham et al. does not suggest altering Schmitt to use the count displayed in display A to regulate position-dependent output signals to constant amplitudes as recited in claim 24. Without such suggestion or motivation, the rejection is improper and should be withdrawn.

Note that the rejection of claim 25 is improper because neither Schmitt nor Graham et al. discloses or suggests converting the value of the controlling variable into a digital signal suitable for serial transmission.

The rejection of claim 26 is improper. Claim 26 recites a process phase that is similar in language to that recited in claim 3. Thus, for reasons similar to those recited above in Section B.1, the rejection is improper and should be withdrawn.

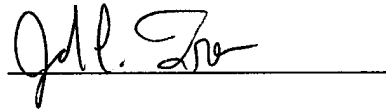
The rejection of claim 30 is improper. Claim 30 recites transmitting the digital signal in a serial protocol at a predetermined bit width to an evaluation unit. As pointed out in Section A.1, Schmitt does not disclose or suggest such transmitting. Since Graham et al. does not suggest altering Schmitt to perform the recited transmitting, the rejection is improper and should be withdrawn.

Note that each of the deletions of "(D)" in claim 26 are being made to clarify Applicant's invention. Since the amendments do not change the scope or intended meaning of claim 26, the amendments are not being presented for reasons of patentability as defined in *Festo*.

### **CONCLUSION**

In view of the arguments above, Applicant respectfully submits that all of the pending claims 1-12 and 14-34 are in condition for allowance and seek an early allowance thereof. If for any reason, the Examiner is unable to allow the application in the next Office Action and believes that an interview would be helpful to resolve any remaining issues, he is respectfully requested to contact the undersigned attorneys at (312) 321-4200.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John C. Freeman", is written over a horizontal line.

John C. Freeman  
Registration No. 34,483  
Attorney for Applicant

BRINKS HOFER  
GILSON & LIONE  
P.O. Box 10395  
Chicago, Illinois 60610  
(312) 321-4200

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